

Abstract

A microbial adherence inhibitor specific to lactic acid producing microorganisms, in the form of fowl egg antibodies is disclosed, along with the method of making it and methods of using it. The inhibitor functions by substantially preventing the attachment or adherence of colony-forming immunogens in the rumen and intestinal tracts of host food animals. The inhibitor is made by inoculating female birds with the immunogen, allowing time for an immune response in the female bird and then harvesting the eggs that contain antibodies to the immunogen. The egg contents can be dried or used as a liquid and added to the feed or water for the host animals. Dependent upon the particular immunogen with which the female bird is inoculated, the egg antibody is used to promote the growth of food animals by improving feed conversion rates by decreasing the lactic acid production caused by the presence of certain colony-forming organisms in the animals, and to substantially reduce or eliminate the incidence of species that have been linked to very high production of lactic acid which can result in reduced performance and in acute situations, dangerously low rumen pH levels. When high levels of lactic acid are present in the rumen, rumen ulcers can form. When rumen ulcers are present other bacteria such as *Fusobacterium necrophorum* can escape the rumen and cause liver abscesses or laminitis, which further reduce feed conversion efficiency. Colony forming immunogens such as *Streptococcus bovis* (a major lactic acid producer) and *Fusobacterium necrophorum* can both be targeted by antibodies to enhance feed efficiency.